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09/23/2003

Robert Miller

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EXAMINER

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**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Application Number: 10/669,116
Filing Date: September 23, 2003
Appellant(s): MILLER, ROBERT

Michael Scalise
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed September 12, 2007 appealing from the Office action mailed June 1, 2007.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

No amendment after final has been filed.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

Lessar et al. (US 6,006,133)

Gan et al. (US 6,790,561)

Merlin et al. (US 5,552,574)

Inagaki et al. (US 2004/0247951)

Miyazuki et al. (US 6,315,801)

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 2, 4, 7, 8, 12, 16, 17, 19- 24, 26 and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lessar et al. (US Patent 6,006,133) in view of Miyazuki et al. (US Patent 6,315,801) and Merlin et al. (US Patent 5,552,574).

Lessar et al. teach an energy source having a planar layered structure with anode and cathode layers sharing separator layers in between. The separator layers are impregnated with a solid or liquid electrolyte. The anode and cathode layers have registration tabs extending from their perimeter. The entire assembly is sealed in a case. The anode and cathode layers are connected electrically (column 8 lines 59-67, column 9 lines 1-17).

Lessar et al. fail to teach an identification code on the exposed portion of the current collector.

Miyazuki et al. teach process control and identification marks formed on the current collector portion of an electrode (abstract; column 4 lines 27-28). The marks are needed to effectively perform manufacturing processes and ensure process control (column 2 lines 58-67; column 3 lines 1-5 and 29-31).

Further, Miyazuki et al. teach that the data on the barcode can be manufacturing data. The examiner believes that the weight of the current collector and a gram amount of the electrode active material, as well as any other values relating to the current collector or cell, are manufacturing data.

It would be desirable to put the information of Miyazuki et al. on the exposed portions of Lessar et al. in order to provide information needed for manufacturing processes and to ensure process control.

Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention to put the information of Miyazuki et al. on the exposed

portions of Lessar et al. in order to provide information needed for manufacturing processes and to ensure process control.

Regarding claims 24, 26 and 27, Miyazuki et al. teach that the current collector is made of nickel or copper (column 11 lines 21-30). Since Lessar et al. are silent on the current collector material, it would have been obvious to one having ordinary skill in the art at the time of the invention to use these commonly known materials as the current collector because they are chemically compatible in the environment of a battery.

Lessar et al. in view of Miyazuki et al. fail to teach that the marks are etched; however, Miyazuki et al. teach that former printed marks were susceptible to damage (column 2 lines 58-67).

Merlin et al. teach a method for marking particulars on a card having metal contacts. They teach the use of a laser beam to etch said particulars, such as a security message or manufacturer's identification. The etching can be performed at any stage in the manufacturing process. This process permits units to be identified individually (abstract, column 1 lines 15-17, column 2 lines 6-38).

Further, regarding claims 20 and 22, the purpose of providing information on a part is to allow for information about the part to be accessed. If the information were not to be used, then there would not be a need to put information on the part. Scanning the identifying information on the current collector tab of Lessar et al. in view of Miyazuki et al. that was put there using the method of Merlin et al. would

allow one working with the current collector to access the information when it was needed.

Adding the identifying information of Merlin et al. to the registration tab on the anode or cathode of Lessar et al. in view of Miyazuki et al. allows one working with the anode or cathode to put information about the particulars, such as a security message or manufacturer's identification, of said anode or cathode. This also allows for the information about the part to be recorded on the part so that it can be easily accessed.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use the etching process of Merlin et al. to put identifying marks on the registration tabs on the anodes and cathodes or the housing casing of Lessar et al. in view of Miyazuki et al. in order to provide information about the anodes and cathodes

Claims 9-11, 13-15 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lessar et al. in view of Miyazuki et al. and Merlin et al. as applied to claims 1 and 7 above, and further in view of Gan et al. (US Patent 6,790,561).

The teachings of Lessar et al., Miyazuki et al. and Merlin et al. as discussed above are incorporated herein.

Lessar et al. in view of Miyazuki et al. and Merlin et al. teach an electrode with an active material contacted to the current collector, a barcode located on the current collector containing data about the cell, a counter electrode, a separator between the electrodes, a casing housing the electrodes, and an electrical

connection between the electrodes. Lessar et al. in view of Miyazuki et al. and Merlin et al. teach the use of the electric energy storage device, specifically an electrochemical or electrolyte capacitor, in an implantable medical device. Lessar et al. in view of Miyazuki et al. and Merlin et al. fail to teach the use of silver vanadium oxide (SVO) and fluorinated carbon (CF_x) as active electrode materials, the wing shape, or the method of forming the electrodes.

Regarding claim 25, Miyazuki et al. teach that the current collector is made of nickel or copper (column 11 lines 21-30). Since Lessar et al. are silent on the current collector material, it would have been obvious to one having ordinary skill in the art at the time of the invention to use these commonly known materials as the current collector.

Gan et al. teach a method for forming an electrode having two active materials with the following configuration: SVO / current collector / CF_x / current collector / SVO (column 2 lines 35-54, column 8 lines 7-12).

The use of these materials allows for electrode active materials having different strengths and weaknesses to share both ions and electrons during cell discharge (column 2 lines 24-36).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use the configuration taught by Gan et al. in the electrical energy storage device of Lessar et al. in view of Miyazuki et al. and Merlin

et al. in order to create a cell structure that could share both ions and electrons during cell discharge.

With regards to claim 11, Gan et al. teach that the anode current collector can be formed in some other geometry in order to allow an alternate low surface cell design (column 5 lines 53-64). Changing the shape of the cathode to match the shape of the anode would reduce the amount of surface area not matched by the cathode.

Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention to modify the current collectors of Lessar et al. in view of Miyazuki et al. and Merlin et al. to have the configuration with two active materials mentioned above and a different shape, such as a wing shape with the registration tab between the two wings.

Regarding claim 12, Gan et al. teach the use of a jellyroll-type configuration (column 9 lines 15-21).

This configuration allows for a larger surface area of contact among the parts of the cell.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to put the current collectors of Lessar et al. in view of Miyazuki et al. and Merlin et al. in the configuration mentioned above into a jellyroll-type configuration in order to increase the surface area of contact among the parts.

As for claim 15, Gan et al. teach the use of the electrical energy storage device having an electrode of the configuration SVO / current collector / CF_x / current collector / SVO in an implantable cardioverter defibrillator (column 3 lines 1-2).

The use of a cell having an electrode of the type described above is particularly well suited for this use, according to Gan et al. This teaching would suggest the use of such devices as medical implants.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use the electrode made by the combination of Lessar et al. in view of Miyazuki et al. and Merlin et al. and Gan et al. as discussed above in an implantable cardioverter defibrillator because it is taught by Gan et al.

(10) Response to Argument

Each of the following points is a summary of Applicant's main points from the Arguments section. The examiner's arguments concerning the point follow each bullet point.

Applicant discusses:

- The teachings of Lessar et al., specifically the teaching of registration tabs (page 11).
 - The examiner agrees with Applicant's statement of the teachings of Lessar et al.
- The teachings of Miyazuki et al., specifically the teaching of a process for producing an electrode plate with an identification mark, wherein the identification mark is made from active material (pages 12-13).
 - The examiner agrees with Applicant's statement of the teachings of Miyazuki et al.
- The teachings of Merlin et al., which teaches a method of marking using a laser, and that the markings may be recognized by sensors (page 13).
 - The examiner agrees with Applicant's statement of the teachings of Merlin et al.
- Further teachings of Miyazuki et al., at column 2 lines 58 to column 3 line 15. This passage of Miyazuki et al. concerns the motivation for Miyazuki et al. to create their identification mark using active material instead of printing ink, which was previously known to be used in the art. The

passage also states that printed ink identification marks were deficient, and that active material identification marks are an improvement over the previous identification marks (pages 13-15).

- The examiner agrees that Miyazuki et al. teach that their invention is an improvement over previous technology.
- Arguments stating that one having ordinary skill in the art would not be motivated to improve upon Miyazuki et al. because Miyazuki et al. is an improvement over existing technology, and that the examiner has not provided motivation (pages 15-16).
 - The examiner disagrees. One of ordinary skill in the art would be motivated to improve on Miyazuki et al. using etching to create the identification marks as taught in Merlin et al., since etching can be performed at any stage in the manufacturing process, not only when the active material is being applied, thus allowing more flexibility in the manufacturing process and allowing for important information to be provided before the active material is applied, if necessary. Etching also offers advantages over active material deposition because it is not susceptible to damage, since one of ordinary skill in the art would recognize that active material may be consumed during the operation of the battery, and that active material may be removed from the plate (see, for example, Figure 6

of Miyazuki et al.). See also pages 4 and 8 of the Final Rejection mailed June 1, 2007.

- Possible reasons that one of ordinary skill in the art might be motivated to improve upon a reference, including that the reference is ineffective.

Applicant further states that there is no indication that Miyazuki et al. is ineffective (page 16).

- This argument is not convincing, since an invention does not need to be ineffective in order to be improved. A reference is unlikely to disclose the shortcomings of the invention, even if those shortcomings are known by the inventor.
- Merlin et al., stating that, since Merlin et al. teach manipulation of an already existing cell component, which Miyazuki et al. already teach, then Merlin et al. is redundant. Further, Applicant poses the question: why manipulate an already existing cell component to provide identification mark in the manner taught by Merlin et al. when the Miyazuki et al. reference already teaches doing that?
 - This argument returns to the question of motivation to combine Miyazuki et al. and Merlin et al., which was discussed previously.
- The fact that numerous improvements over existing technology have already been patented.
 - While it is true that many patents have been issued that are improvements over existing technology, surely an equal amount if

not more applications for an improvement over existing technology have been rejected. When an improvement is obvious, as in the case of the instant application, then it does not merit protection by a patent. For example, in the recent Supreme Court decision, *KSR International Co. v. Teleflex Inc. et al.*, 550 U.S. __ (2007), it was held that, although the KSR invention was an improvement on brake pedals, it was not non-obvious in view of the Engelgau patent, owned by Teleflex. An invention may be an improvement over the prior art, but the fact that it is an improvement does not make it non-obvious or patentable.

- Claims 9-11, 13-15 and 25, which were rejected under 35 I.S.C. 103(a) as being unpatentable over Lessar et al. in view of Miyazuki et al., Merlin et al. and Gan et al. Applicants state that, since claims 1 and 7, from which the mentioned claims depend, are patentable over the prior art, then the claims are patentable.
 - The prior art, specifically Miyazuki et al. and Merlin et al., is discussed above.

Essentially, Applicant argued that there is no motivation to improve Miyazuki et al. since Miyazuki et al. is an improvement over the prior art. The examiner believes that one having ordinary skill in the art would be motivated to etch identification marks, as taught in Merlin et al., instead of forming identification marks from active material, as

taught in Miyazuki et al., since the etchings could be formed at any stage during production, and since the etchings would be more permanent.

Applicant's argument that one would not be motivated to improve upon Miyazuki et al. since Miyazuki et al. is in itself an improvement upon existing technology is not found convincing. Improving upon already improved inventions is not beyond the level of ordinary skill. Further, the fact that Miyazuki et al. do not teach that their invention may be further improved upon does not mean that it cannot be improved upon. Why would an inventor disclose in their patent faults in their invention? Why would an inventor disclose possible improvements on their own invention, thus making them public information and jeopardizing continuations in part?

In summary, it is the position of the examiner that one of ordinary skill in the art would recognize that Miyazuki et al. could be improved upon, and that one of ordinary skill in the art would be motivated to improve on Miyazuki et al. by forming the identification marks using etching, as taught by Lessar et al., instead of active material since the etching could be performed at any stage during production and since the etching would be less susceptible to damage.

(11) Related Proceeding(s) Appendix

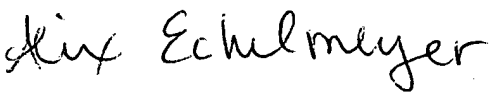
No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

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Respectfully submitted,

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